DOCUMENT RESUME

ED 226 633 HE 015 613

TITLE Transformations in Higher Education: Looking Ahead at Management Issues in the '80s.
INSTITUTION Peat, Marwick, Mitchell and Co., New York, N.Y.
PUB DATE 82
NOTE 19p.
AVAILABLE FROM Peat, Marwick, Mitchell & Co., 345 Park Avenue, New York, NY 10154 ($5.00).
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage
DESCRIPTORS *Administrative Change; Administrators; *Change Strategies; *College Administration; *College Role; Computers; Educational Change; Educational Facilities Planning; Federal Regulation; *Financial Policy; Futures (of Society); *Higher Education; Management Information Systems; Marketing; Nontraditional Students; Personnel Policy; School Organization

ABSTRACT

Future changes that may affect higher education and management approaches that should be used by governing boards and administrators are discussed. Population trends that will affect academic and support programs are noted, and it is suggested that a declining demand from traditional students may cause institutions to specialize in selected programs and to provide offerings and schedules to serve nontraditional students. There will be continuing shifts in governmental support of basic research, and universities and corporations may need to form partnerships for pursuing mutual research interests. In addition, technological change is providing opportunities for improved use of computers, including microcomputers and minicomputers. The following concerns are considered: using marketing for a changed mission; changing from the traditional organizational structures; strategic and operational planning; fund-raising strategies; the role of financial analysis; maximizing asset returns; cost management; federal regulations; management information needs; a changing faculty profile; strengthening top-level management; building professional administrators; effective personnel administration; benefits planning; facility planning and utilization; accounting and auditing; and the impact of taxes. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED226633

PEAT
MARWICK
MITCHELL
& CO.

TRANSFORMATIONS IN HIGHER EDUCATION

Looking Ahead at Management Issues in the '80s

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

✓ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Peat Marwick Mitchell & Co.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

HE 015 613

Contents

Foreword 1
Marshaling Resources for Tomorrow 2
An Evolving Mission 3
A Changing Student Profile 3
Impact on Programs 3
Specialization: A Growing Need 3
New Instructional Services 4
Opportunities in Research 4
The Impact of Computers 5
Marketing for a Changed Mission 6
Strengthening the Management Pattern 7
Responsibilities of the Board 7
The Changing Organization 7
Opportunities for Growth 7
Strategic and Operational Planning 7
The Need for Financial Viability 8
Competing for Funds 8
The Role of Financial Analysis 8
Fund-Raising Strategies 8
Maximizing Asset Returns 9
An Emphasis on Cost Management 9
Dealing with the Government 10
The Crucial Role of Management Information 11
Meeting Management's Needs 11
A Wide Range of Systems 11
A Complex Process 11
Managing the Computer 11
People: The Greatest Resource 12
A Changing Faculty Profile 12
Strengthening Top-Level Management 12
Building Professional Administrators 12
Effective Personnel Administration 13
Benefits Planning 13
Facilities: The Largest Investment 14
Planning and Using Facilities 14
The Accounting and Auditing Outlook 15
New Trends in Accounting Principles 15
The Need for Independent Audits 15
Audits of Government Programs 15
Internal Auditing 15
The Impact of Taxes 16

Copyright © 1982 by Peat, Marwick, Mitchell & Co.
2401020736 U.S.A.

Foreword

Institutions of higher learning are in an exciting yet vexing decade. New needs will emerge, some old needs will evaporate, and other needs will continue. As these institutions recognize the signals of change, we believe they will take the requisite steps to seize their opportunities for the future.

As colleges and universities focus their attention on the implications of forces now at work, they will begin to equip themselves with mangagement tools and techniques needed to effect change and will thus become "change agents." We hope that this booklet will play a role in helping governing boards and administrators to initiate and foster the ongoing development of creative strategies as they plan for the future.

The observations advanced in this booklet represent the thinking of Daniel D. Robinson, director of Professional Services to Education and Other Institutions, Frederick J. Turk, market director for Consulting Services to Education and Other Institutions, and other individuals in Peat, Marwick, Mitchell & Co. Their views are based upon many years of experience in providing a broad range of accounting and auditing, management consulting, and tax services to colleges, universities, and other components of our nation's system of higher education. ■

Marshaling Resources for Tomorrow

Higher education, so clearly a source of strength for our pluralistic society, faces the impact of many unsettling environmental factors such as impending declines in enrollment, continuing prospects for inflation, and the prospects for reduced governmental funding.

While some institutions may be discouraged by these trends, we at Peat Marwick believe they can be overcome if higher education recognizes that they signal a need for broad change. Viewing the future of colleges and universities in the United States in a strongly positive light, we are confident that higher education can indeed marshal its resources effectively to cope with the substantial changes anticipated for the 1980s and beyond.

Two key questions need to be addressed: What are the changed circumstances expected in the future environment that will affect higher education? What changes will colleges and universities need to effect in order to cope with these environmental conditions?

Answers to these questions will influence profoundly the innovative planning the '80s will require. This booklet seeks to identify specific issues that should be addressed and to point out related management tools and techniques that should be used by governing boards, administrators, and others as they deal in the years ahead with the future of higher education.

These issues were identified on the basis of Peat Marwick's own experience as a professional firm serving higher education and in the light of our own assessment of prospective change.

The reader should be aware that we have not attempted to catalogue all the issues that might be likely to face higher education in the future. Rather, we have sought to highlight those whose importance has become directly apparent to us as a result of our association with and services to institutions of higher education. It is, of course, impossible to anticipate all the environmental factors that may develop, and it should be recognized that individual colleges and universities are likely to face issues specific to their own circumstances. ■

An Evolving Mission

The mission of higher education in the '80s will be profoundly affected by several factors bearing on the functions colleges and universities will be expected to fulfill.

A Changing Student Profile

The makeup of the general population is shifting in several significant ways that will affect all aspects of academic and support programs. Indicative of such shifts are

- The average number of students in the traditional college age bracket (i.e., 18 to 24) is expected to decline substantially.
- This decline, however, will not be uniform geographically. States in the Sun Belt and Far West will for the most part experience stability or moderate growth, while those in the Northeast, Southeast, and Midwest will face declines in student population.
- A greater proportion of minority students will require the basic educational skills needed to prepare them for college work.
- There will be a greater proportion of middle-aged and senior citizens than ever before, and they will seek a broad range of educational services in ever-increasing numbers.
- American businesses will seek increasing educational services to train managers and workers at all levels in order to establish or strengthen the technical and personal skills that are required if their organizations are to grow and compete.

Since the age–18-to-24 student market in general will be shrinking, it is clear that those institutions that have educational programs of distinction, low tuition rates, or substantial student aid funds will be in a better position to draw from the traditional pool of students. In general, institutions will need to develop new programmatic capabilities to serve the multidimensional needs of the emerging nontraditional student population.

Impact on Programs

Programs offered will be influenced more than ever before by this changing student marketplace, with a new student population that will place unique and challenging demands on faculty and administrators.

To cite one example, there will be a need to develop programs to enable students who are single parents to attend as full-time undergraduates while their children are in day-care centers sponsored by the institution. Another example is a shift in graduate schools from full-time to part-time program enrollment to attract and retain the employed older student.

Specialization: A Growing Need

The clear need to offer educational programs of distinction, as a way of capturing the student market, suggests that many institutions will decide to specialize in selected program areas and devote increased resources to these areas in order to maintain the highest quality. We see more and more governing boards and presidents realizing that the institution cannot be "all things to all people."

New Instructional Services

With a declining demand from their traditional markets, many colleges and universities will take advantage of new educational opportunities in areas that are nontraditional. Examples will include a growing demand by men and women for lifelong learning and second careers. Corporations will seek personnel development programs focusing on written and oral communications, to prepare workers to cope with increasingly complex technological developments.

The timing, content, location, and subject matter of course offerings and communications to nontraditional students will require radical departures from current program-delivery mechanisms. For many institutions, this will result in substantial changes in current organizational structure, teaching style, personnel skills, and facilities to meet the needs of these students.

American businesses benefit greatly from the college and university training provided to their employees. It can be argued, however, that these business entities have not provided the institutions with a level of economic support commensurate with the benefits they derive. Yet, if institutions analyze this level and approach businesses for increased support, the result may be an even greater emphasis on curricula that are oriented to jobs and careers. This will certainly influence institutional direction and educational programs.

Opportunities in Research

There will be continuing shifts in governmental support of basic research, as part of federal government efforts to rearrange the research capability of the nation in line with national priorities. Although universities represent the single most significant basic research capability of the country, in recent years this capability has been severely weakened. In the short run, federally sponsored research seems to be declining, but it can be expected that in the long run the federal government will focus resources on rebuilding this research capability, particularly in light of the nation's shrinking competitive position in world markets.

Apart from government-supported research, however, it seems clear that some research-oriented institutions will attempt to use their existing research capabilities to take advantage of many evident opportunities. Some will undertake proportionately more applied research aimed at successful product development and marketing, doing so in several ways: separate yet related research foundations; joint ventures with private enterprises (that is, profit-making corporations or other nonprofit corporations); and the like. It is clear that this will require significant change in the way universities conduct their affairs. Moreover, if corporations are to participate, they must see significant advantages in such joint relationships. In general, we believe that these ventures will not achieve their full promise because of the generally divergent goals of industry and education, unless the partnerships are geared toward mutual interests.

All of these institutions will face new requirements, of course, as they proceed to organize private businesses and nonprofit enterprises, establish new systems for mutually beneficial research, and plan for compliance with governmental regulations affecting sponsored research.

The Impact of Computers

As they proceed to adjust their instruction, research, and public-service programs, colleges and universities will need to recognize that computerization is now within their grasp and the grasp of their prospective constituencies. This is a direct result of rapidly changing technical capabilities and the availability of computer hardware at relatively low cost. Technological change is providing opportunities for both new computerization and improvements to existing computerization, particularly with the advent of microcomputers and minicomputers. We expect that this technological change will continue to accelerate in the decade of the '80s.

As a result, academic computing capabilities and computer-assisted instruction will become a widespread reality, and "computer literacy" will become a fundamental requirement for an educated and productive society. Furthermore, it will become clear that significant data processing and information needs, both for administrative purposes and for research, can be satisfied at lower cost than in the past. Needs that were never met, moreover, will now be satisfied.

Colleges and universities will move toward the era of a "paperless society" by using minicomputers, microcomputers, and terminals in networks that will facilitate administrative systems processing. On-line, real-time transaction processing and information maintained centrally and in decentralized micro/mini systems will become a reality for many institutions. This will eliminate the multiplicity of systems and clerical processing practices now evident throughout our institutions.

Generalized administrative software will become increasingly available and accepted by colleges and universities. Larger institutions are beginning to accept the fact that it is less risky to acquire software packages than to design systems internally. Smaller institutions, moreover, will be acquiring academic and administrative software capabilities that are of low cost and that can be implemented with relative ease.

Data processing resources will increasingly represent a significant portion of an institution's operating budget. The effective management of these resources will be critical to the institution and should be given as much attention as is given to the careful management of capital investments. ■

Marketing for a Changed Mission

As the mission of a college or university evolves in response to a changed environment in the '80s, the importance of sophisticated marketing will grow. More than ever it will be necessary to assess changing needs carefully, to develop a strategy for change, and to communicate such changes to the college and university community. Such a marketing program will be essential to gain a broad range of internal and external support for the institution. Formal marketing programs, long since developed and tested in commercial enterprises, will be increasingly accepted by institutions. Marketing in an academic environment will involve developing a close understanding of existing and planned academic and support programs and then determining how these should be communicated to students and to the other constituencies that institutions wish to reach.

A successful marketing program will be shaped in the light of revised goals, changed objectives, and the proposed mix of old and new programs. For programs of instruction, research, and public service, marketing activities will encompass three basic components: market research, market strategy, and market development.

Market research will examine the extent to which program services are achieving current penetration, gaining receptivity, and satisfying the clientele. It also will seek to identify new or changing markets that need to be served. Market strategy will identify approaches that can be used to take advantage of emerging opportunities, changes in current programs, and a changing set of resources. Market development will identify appropriate methods to be used in communicating with targeted students and other constituencies.

Marketing methods will also play an increasingly important role in an institution's efforts to raise funds from individuals, corporations, and foundations, as well as to enhance alumni support of its programs.

Institutions are likely to concentrate on students, and the student recruitment and admissions program, to identify market opportunities. They will determine whether further market research is needed to identify market strategies for attracting qualified students and, on the basis of that analysis, will prepare a market development program. ■

Strengthening the Management Pattern

As an institution develops its mission in response to a changed environment and mounts aggressive marketing programs in light of that mission, it becomes increasingly important to strengthen management processes for maximum success.

Responsibilities of the Board
In the environment of the '80s, there will be a growing awareness by governing boards of the significance of their fiduciary responsibilities. Increasingly, boards will seek assurance that the organizations they serve are financially sound and operating efficiently. They will want to know that assets are properly safeguarded, that internal controls exist, and that the organization is performing its mission effectively.

The Changing Organization
As changes described earlier occur, institutions may discover that current organizational configurations no longer work and in fact may be counterproductive. They will conclude that major adjustments are needed. Many of the changes will require radical departures from traditional organizational structures. Functions normally centralized may become decentralized—and vice versa. Multiple reporting relationships will be needed to pursue opportunities aggressively. New roles and responsibilities, communications vehicles, and governance mechanisms are likely to emerge.

Many institutions will formally address the need for changing their organizational structures and typically will perform three distinct but related activities. *First,* they will conduct an organizational assessment to examine critically the current structure (formal and informal) and functions performed, as well as to identify gaps and overlaps in roles and responsibilities throughout the organization in light of changing programs and needs. *Second,* they will proceed to consider organizational restructuring to change roles and responsibilities, so as to maximize the use of people in achieving institutional goals and objectives. *Third,* after further deliberation, they will prepare functional descriptions of new, revised, and combined organizational roles and responsibilities, together with related position descriptions.

Opportunities for Growth
In many cases, institutions will identify opportunities to grow by acquiring other institutions or merging with them. They will see the possibility of expanding services to new markets in this way, doing so at reduced costs because of economies of scale. Such mergers, however, will place enormous burdens on existing administrative systems and organizational structures, making it imperative that great care be given to the analysis, planning, and implementation of required changes.

Strategic and Operational Planning
All the current and anticipated pressures facing governing boards and administrators will lead to a greater awareness of the need for effective planning in the '80s. The strategic plan will usually look five years into the future and will be updated annually. Strategic planning, if it is to be successful, will require an established long-range planning process, an organization for planning, and a definitive timetable.

The operational plan (sometimes referred to as a budget) will be prepared for three years, with the first year being the detailed budget and those for the following two years being prepared at a higher level of aggregation. Sophisticated operational planning techniques will be used to move the institution ahead along the lines described in the strategic plan. Linking the operational plan to the strategic plan will be an important element in a successful planning process. There will certainly be substantial use of the computer to assist in preparing the financial and related projections necessary to support the planning process. Computerized planning models will be widely accepted in developing strategic and operating plans. ■

The Need for Financial Viability

It is certain that in the future there will be an increased interest in the financial viability of educational institutions on the part of board members, administrators, bank loan officers, and others. These individuals often assumed in the past that the future of the institutions they were dealing with was sound, and in many cases they did not understand or question the financial statements presented to them. Now, however, they generally are more aware of the fact that in some cases financial viability is open to question.

In the future this awareness will cause institutions to

- Use ratios and other analyses that identify trends in financial health and operations and relate to peer institutions for purpose of comparison
- Initiate intensive long-range planning and budgeting programs
- Prepare financial feasibility studies before they incur new debt or restructure existing debt
- Prepare strategies and projections to structure a debt repayment plan or (in extreme cases) to achieve a bankruptcy type of reorganization under the protection of the courts

Competing for Funds

The question of financial viability will also take on greater significance as competition increases among colleges and universities for funding, from both governmental and private sources. As the level of resources available to grant-making organizations declines in real terms, there will be a corresponding decline in available funding.

Moreover, there will be a changing emphasis in funding support by third parties and government. The interests of private donors, corporations, foundations, and government are likely to change in tandem with changes in demographics and in the needs to be met.

It seems likely that a greater share of the limited available resources will therefore go to those institutions that demonstrate prudent management of programs and fiscal affairs, as well as to those exhibiting intrinsic qualities that meet the goals of the funding sources.

The Role of Financial Analysis

Because of this growing interest in the financial viability of institutions on the part of governing boards and administrators in the exercise of their fiduciary responsibilities, as well as on the part of bank loan officers, investment bankers, donors, and others, institutions will need to explain their financial health and determine their future viability. These interested groups will become more anxious than ever before to compare one institution with other similar institutions, in order to identify differences that might suggest justifiable changes. Governing boards and administrators will see the need to ask probing questions regarding the causal factors affecting the financial results reported by an institution. Answers to these questions will provide a better understanding of what changes might be initiated and the results that might be expected from these changes.

Fund-Raising Strategies

Given the increased competition by nonprofit organizations for private funds that will occur in the '80s, fund-raising strategies will take on heightened importance. Colleges and universities will increase their already extensive efforts in raising funds from alumni, friends, corporations, and foundations. Public institutions will devote significant resources to increased fund raising to offset declines in state support.

Maximizing Asset Returns

In light of the increased concern over financial viability, it is certain that in the '80s there will be increased interest in effectively using institutional assets. Asset management programs that include cash and all assets readily convertible to cash—such as student accounts receivable, patient receivables (for those institutions owning and operating hospitals), and security investments—will be developed to maximize the return on assets.

Institutions will find it necessary to give greater emphasis to improved cash management practices and billing and collection procedures. Investment objectives that properly balance growth and income for all or parts of an institution's investment portfolio will have to be established. Investment advisors will have to be selected who can meet the objectives of the institution, and performance measurement methods will have to be developed to monitor their success in doing so.

An Emphasis on Cost Management

During the '80s, costs will continue to escalate at least as rapidly as the rate of inflation. Certain costs, such as those for plant operations, maintenance, and energy, will outpace the inflation rate. This will surely be the case in certain geographic areas, such as the Northeast and Midwest. Moreover, educational institutions will continue to be especially vulnerable to increases in labor costs, because they are labor intensive and in the past have not emphasized systems to monitor and improve productivity.

Nonetheless, there will be a growing desire to see institutions of higher education strengthen their own organizational structures so as to improve productivity and increase efficiency. It will also be important to make sure that tools are at hand that can improve decision making by management.

Many institutions will find their revenue sources unable to keep up with the expected inflationary spiral in the '80s, and consequently they will have no choice but to reduce costs. To this end, they will have to reconsider needs for staff or plan for increased productivity by using work measurement techniques to set work standards. Increased use of meaningful performance appraisal procedures will also emerge. Institutions will seek to identify opportunities for reassigning reponsibilities and modifying work flows, forms, and procedures, in order to eliminate inefficiencies, improve internal controls, and automate functions that are clerically intensive or are of an analytic nature. There will be an increased use of cost accounting to determine the cost of services for purposes of making cost projections, setting fees (or prices), and controlling costs.

An increased involvement of the federal government during recent years in the internal activities of colleges and universities is traceable in the main to a demand by legislators and their constituencies for more accountability in the use of government funds. Indicative of this involvement are federal regulations that affect colleges and universities, including OMB Circular A-21 (*Cost Principles for Educational Institutions*) and OMB Circular A-110 (*Grants and Agreements with Institutions of Higher Education...Uniform Administrative Requirements*), issued by the Office of Management and Budget.

New regulations have also been issued that affect student financial aid programs, provisions related to sex discrimination under Title IX, aid to the handicapped, and matters involving the Occupational Safety and Health Administration (OSHA).

The government has been reevaluating several of these regulations recently, and it seems likely that in the future a balanced approach will be achieved in meeting public concerns for accountability in the use of government funds. Existing regulations will probably be modified to provide a reasonable and practicable means of achieving accountability without causing an excessive intrusion of government into the affairs of educational institutions. The effect of these modifications will be to encourage institutions of demonstrated high quality through continued funding support, while governmental support of programs in institutions of lesser quality is minimized or eliminated.

Whatever the regulatory pattern eventually becomes, it is clear that colleges and universities will need to take several steps to be sure that they are in compliance with specific regulations. For instance, under OMB Circular A-21 institutions need to establish systems for effort reporting, equipment inventory, interdepartmental billing, and other functions. They will have to establish policies and procedures to provide direction to user departments, the contracts and grants function, the financial aid function, personnel, and others involved.

It will be essential for institutions to keep abreast of prescribed regulations to make sure that they are satisfying the required compliance provisions of funding legislation. Their experience in achieving compliance will provide them with a solid basis for proposing reasonable and practicable changes in legislation that will help to provide assurance, both to government and to the institutions themselves, that government funds are being used wisely for the purposes intended. ■

Meeting Management's Needs
With the increasing number of policy decisions that governing boards and administrators will have to make in adjusting to the changing environment of the '80s, it is clear that they will need to have information that is timely, accurate, and comprehensive.

It will be essential for them to identify the kinds of information they will need and the frequency with which this information must be prepared and distributed. They will have to determine how data will be collected, summarized, and reported as part of the process of preparing useful reports. Finally, they will have to decide how the information that becomes available will be analyzed in order to produce the insight that they need for decision making.

A Wide Range of Systems
In addition to the management information systems, a wide range of specific operating systems will need to be developed. Many institutions have already developed or improved systems that support their activities, but the systems are not being maintained. This is particularly true of computer-based systems that become obsolete as hardware technology changes. Deferred systems maintenance is similar to deferred building maintenance but is more difficult to appreciate because software is usually not assigned a specific replacement cost value like most other assets.

A Complex Process
The process of developing, implementing, and maintaining the various systems has changed markedly in recent years. Highly structured methodologies have been used successfully to reduce the risk of failure in systems development and implementation work. It appears likely that this highly structured approach will gain in popularity in the years to come. Effective project management will be essential to assure the successful outcome of a systems development effort. Professionals who have both the ability and experience will be used as project managers or will assist institutional personnel. Project management will encompass the use of detailed work plans and careful monitoring of progress, with effort redirected where necessary.

Managing the Computer
Increasingly central to the entire information mangement process, of course, will be control of the computer itself, a resource that must be used with great care for several reasons. Cost alone is of great concern, but there will also be issues of privacy for student, personnel, payroll, and other records. Institutions will need to be concerned at the highest levels with three basic issues. *First,* the institution will be increasingly anxious to be sure that it is receiving maximum service from the potential inherent in its computer equipment, and on a cost-effective basis. *Second,* it will be necessary to guard against computer fraud by establishing effective controls that protect the institution's records from tampering or other forms of misuse. *Third,* there will be increasing concern about computer center organization and the ability to maintain the skills required to provide computer services efficiently. In this regard, we foresee more aggressive efforts in seeking talented computer staff and in training personnel to assure that effective service is provided. For some institutions, this will be an enormously difficult undertaking requiring greater reliance on software vendors, contract programmers, and other computer service organizations.

The impact of the current shortage of computer-literate personnel in the job market will be mitigated somewhat by the potential inherent in decentralization of computing through use of minicomputers and microcomputers in a network arrangement; the development of "user-friendly" computer languages permitting system users to access information easily; and other emerging technology. ■

People: The Greatest Resource

For a college or university, the employed individuals on campus—faculty, managers, staff and others—are its greatest resource, and during the '80s several vital factors will affect its ability to manage this resource effectively.

A Changing Faculty Profile

It has become increasingly apparent that faculty salaries have not been keeping pace with inflation. Recently, institutions have attempted to increase salaries and improve benefits packages so that they can attract and retain faculty members of the highest quality.

Of particular concern today is the loss to industry of key faculty members in such special fields as engineering, science, and mathematics who are being drawn away at higher salaries to help companies meet their immediate needs for talented professionals. This migration is likely to have a long-term detrimental impact on the strength of educational programs and consequently on the ability of institutions to develop future generations of badly needed engineers, scientists, and mathematicians.

One idea that has been advanced to cope with the attraction of industry calls for extending the private practice concept, which is being used for doctors in medical schools, to include other segments of a university. Doing so would create a formally organized means for groups of faculty members in certain disciplines to provide professional services to third parties, thus generating additional income for themselves and their institutions.

At the same time, however, it must be recognized that the number of faculty members required in certain disciplines will decline in tandem with the expected decline in student population and the program changes that will have to be made as a result of this decline.

Faculty age levels are another important concern, because it is expected that in four-year colleges and universities the percentage of tenured faculty members who are over age forty-five will rise from approximately 56 percent in 1980 to 80 percent in 1990. Alternatives to the tenure system are likely to develop, since talented young Ph.D.s will tend to turn to the business world to the extent that "veteran" educators come to hold a higher proportion of the high-level positions.

Strengthening Top-Level Management

In the past, senior management positions in institutions of higher education were often filled by individuals whose qualifications were primarily of an academic nature. While these qualifications will continue to have importance in the future, it is becoming more and more obvious that to ensure creative direction for institutional programs these individuals must have equal facility in coping with the administrative responsibilities associated with their positions. For example, the criteria used in the selection of presidential candidates now frequently seem to include an individual's proven ability to administer in a complex organizational environment.

Building Professional Administrators

There will be greater recognition of the need to build a cadre of professional administrators capable of managing specific segments of institutions. Administrators in financially weak institutions will have to be particularly sensitive to management needs, because the margin for error is small, considering the limited resources available.

As the expert use of management tools and techniques becomes more critical in the '80s, administrators who have greater professional training and orientation will be hired by colleges and universities on the basis of their proven management abilities. As a result, compensation will need to increase in order to attract these professionals.

In addition, greater emphasis will have to be placed on the proper recruiting, development, career-path orientation, and retention of professional administrators.

The increased numbers of women who will be employed by colleges and universities in managerial positions will call for special training and development programs.

It must be recognized that, at least for some time to come, there will not be a sufficient pool of professional administrators available to meet all needs. Moreover, many present college and university administrators have not been schooled in management skills. As a result, institutions will need to emphasize management training on technical and general management subjects that will help existing administrators perform their duties and will also be available for board members. Executive search efforts will be more carefully planned to define requirements for positions to be filled in order to identify, evaluate, and hire highly qualified administrators. Career-path planning will require increased emphasis as a concept that can foster self-development on the part of administrators, enhance their motivation, and offer them the opportunity of long-term careers.

Effective Personnel Administration

Effective personnel administration programs will be essential to satisfy the needs of faculty and staff personnel as well as to ensure compliance with government regulations. Personnel administration programs are still in a developing mode, and personnel offices have long been viewed as necessary evils on most campuses. Their role in recruiting and in enforcing policies and regulations has been maligned. Personnel offices must become full-service human resources departments responsible for training, development, benefits consulting, performance appraisal, and the like, in order to prevent the serious institutional dysfunctions that can derive from poor personnel administration.

Benefits Planning

The major portions of formal employee retirement and group benefits represent approximately 15 to 20 percent for the cost of salaries and wages, and it is likely that the cost of fringe benefits will continue to rise in the future. For colleges and universities, sound planning of employee benefit programs will be vital, not only to meet the needs of employees (particularly by providing appropriate retirement benefits at the least cost) but also to satisfy government regulations. Other options, such as tuition remission programs for incumbents and their offspring, as well as housing allowances, will need to be considered.

Insufficient consideration has been given by most institutions to the fact that, while retirement cannot be made mandatory before age seventy under ERISA, "normal" retirement can still take place at sixty-five or earlier. An important task of management will be to shape benefit programs in such a way that most personnel will elect to retire at the "normal" age. ■

Facilities: The Largest Investment

Because facilities typically constitute the largest capital investment of colleges and universities, many will be obliged in the '80s to give close attention to managing this expensive resource.

Planning and Using Facilities

Facilities are an asset in that they accommodate and support an institution's programs. They are a liability, however, in that they generate plant operation and maintenance costs. Older buildings often require substantial reinvestment to prolong their useful lives and to meet current standards of energy conservation and safety.

The institution's task, not an easy one, is to find the point of balance among several variables: satisfying program demands, utilizing existing facilities effectively, and evaluating the need for investment in plant in the context of the full spectrum of demands on university resources.

In general, institutions will be spending increasing amounts on physical plant because of deferred maintenance problems. To offset these costs, it will be necessary to use all space more effectively than has generally been the case in the past.

What will be needed to manage the plant effectively is sophisticated cost/benefit analysis that takes account of factors such as facilities sharing, rental space versus owned space, and interinstitutional cooperation. Institutions must be willing to consider alternatives to past assumptions about physical planning criteria.

An important opportunity may exist in the possible joint use of facilities, particularly through plans by which public institutions would use the facilities of private institutions, and vice-versa. Such uses will require careful analysis by individuals who are sensitive to the programmatic, financial, and political implications of various possible alternative arrangements.

An example would be an arrangement between the recreation department of a city and a university, under which the city would use the university's gymnasia and playing fields during the summer months when their use by the university is low. In such a case, the university would be compensated on a fee-for-service basis. ■

The Accounting and Auditing Outlook

Colleges and universities will need to be alert in the '80s to several lines of development that will affect accounting and auditing.

New Trends in Accounting Principles
It is clear that accounting principles and practices will change and that the changes will affect college and university accounting systems and financial reporting.

For example, the Financial Accounting Standards Board has several projects on its agenda that will affect colleges and universities. These projects include the development of a conceptual framework for financial reporting by nonbusiness organizations, a review of the reporting of service efforts and accomplishments by nonbusiness organizations, and a review of existing literature on accounting by nonprofit organizations that is aimed at determining the extent to which different accounting principles are being followed. Colleges and universities represent one category of nonprofit organizations whose financial accounting practices will be affected.

The Need for Independent Audits
The services provided by independent auditors to colleges and universities are sure to become a subject of increasing concern for two main reasons: increased awareness on the part of governing boards and administrators of their need to meet fiduciary responsibilities in safeguarding institutional assets; and changing attitudes on the part of governmental bodies toward accountability.

Audits of Government Programs
In connection with federal government grants and contracts, a trend is developing for requiring grantees to engage external auditors to perform audits, instead of having them performed by federal auditors. This is already the case, for example, in connection with federal student financial aid programs and might be required under OMB Circular A-110. As this trend develops, external auditors will also be required to render special reports on the expenditure of federal funds for such other programs as research and training.

All of these audits will include evaluations of internal control systems and the extent of compliance with the terms and conditions of grants. A clarification regarding the role of independent external auditors in connection with government funds is likely to emerge in the near future.

Internal Auditing
The increasing concern about fiduciary responsibilities and safeguarding of institutional assets noted earlier, coupled with emerging government audit requirements, will provide an opportunity for colleges and universities to make greater use of internal auditors.

This will result in an increased role and greater responsibility for internal audit functions. It will be important to define internal audit organizational relationships and functional responsibilities, as well as to develop effective audit programs that encompass not only financial but also operational areas. Of great concern will be the question of the degree of independence enjoyed by the internal audit function in reporting to management, to the board, and to the federal government. ■

The Impact of Taxes

Colleges and universities will be significantly affected in the '80s by two general trends involving federal taxation.

First, recent changes in federal tax laws may make charitable giving less economically attractive to major donors. If so, institutions will need to be more aggressive and innovative in their approaches to fund raising. For instance, institutions will arrange to provide counseling to potential donors on the tax implications of various giving programs and opportunities these donors have to minimize taxes.

Second, partly because of the decline in sources of funding, institutions are likely to venture, more than ever, into unrelated business operations as a means of supplementing their limited resources. In doing so, they will encounter increased efforts by the Internal Revenue Service to tax income from such operations.

Governing boards and administrators will need to become aware of increasingly sophisticated and complex aspects of taxes affecting their operations. ■